



Department
for Environment
Food & Rural Affairs

Nanomaterials – Current UK Policy

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Commercialisation of nanomaterials: process,
issues, and management

Burlington House

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Forestry Commission
England



Environment
Agency

Defra's Objective

- Defra's objective is to:

Characterise and promote a proportionate approach to the environmental management of nanomaterials, so as to protect health and the environment while enabling growth.

- Regulatory activity is currently aimed to ensure satisfactory proposals from the European Commission (EC) relating to:
 1. The amendment of annexes to the existing EU REACH Regulation to clarify requirements for nanomaterials
 2. The review of the EC recommendation for a definition of the term "nanomaterial"
 3. "Transparency" measures for increasing public information about nanomaterials

Policy Drivers

- The following are key instruments to support the safe use of nanomaterials and consider their environmental fate:
 1. Metrology, characterisation and quantitation of nanomaterials as manufactured and as they behave or are encountered in the environment;
 2. Nano ecotoxicology;
 3. Risk management and regulation;
 4. Industrial innovation – which includes innovation both in manufactured products and in waste disposal and management; and
 5. Transparency and information provision.



Research and Development

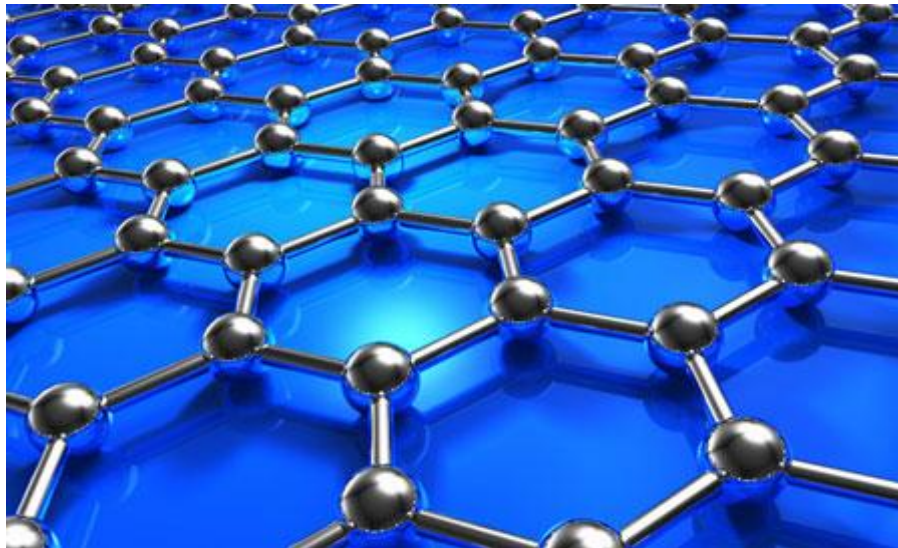


- Required to support policy needs
 - Public dialogue carried out to understand public perceptions of nanotechnologies. Report published in June 2016¹
 - EU FP 7 NANoREG (Regulatory Testing of Nanomaterials) project – final report available on website
-
- Mapping of environment-related nano R&D - communication
 - Horizon scanning - identify emerging issues which may require a Government policy response

Nanomaterial Definition

- EC published the current recommendation on the definition of a nanomaterial in 2011:

“A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm”.



- EC Joint Research Centre have carried out a review to improve workability, three reports have been published
- EC public consultation expected soon...

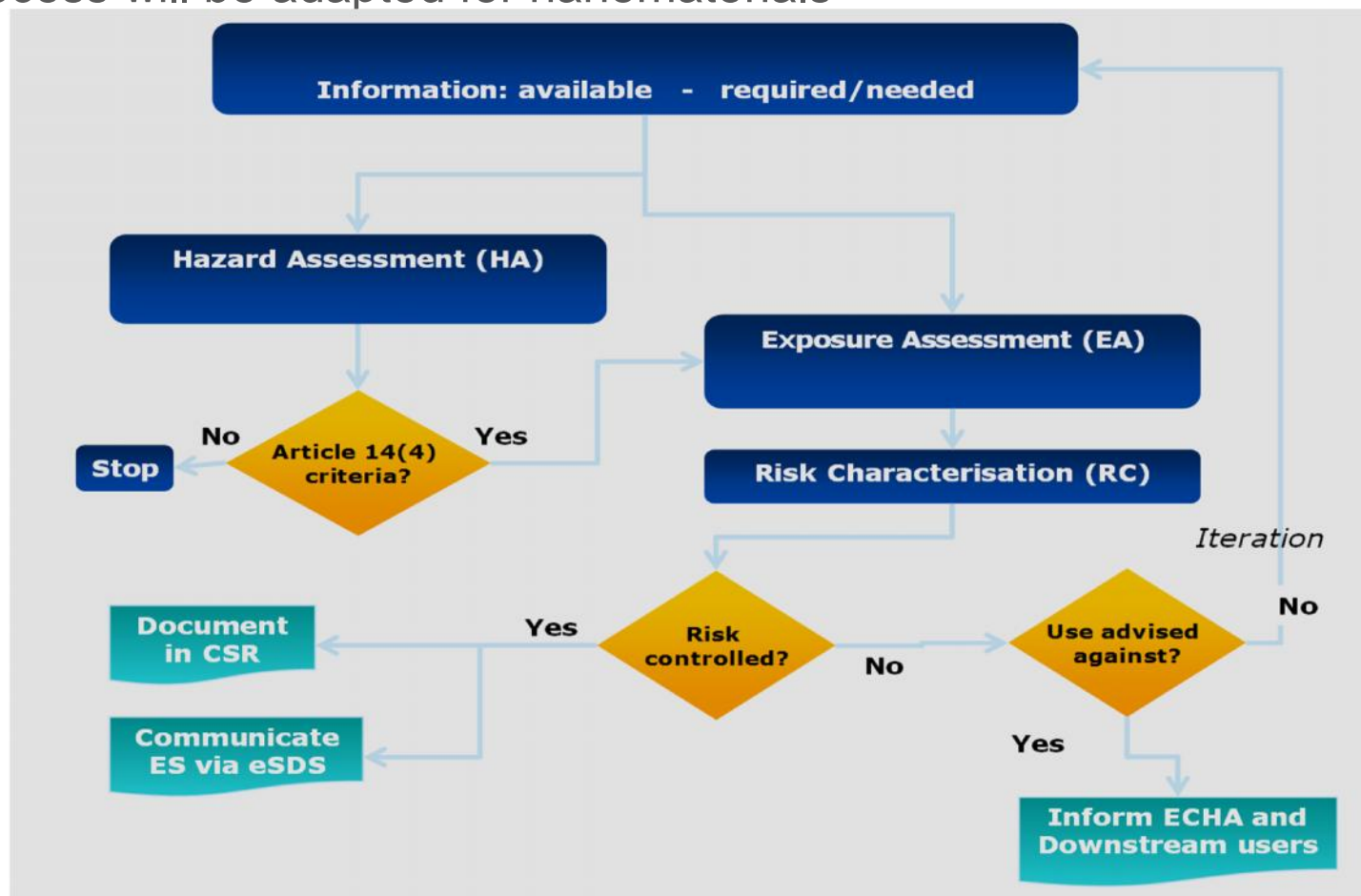
Brief introduction to REACH

- **R**egistration, **E**valuation, **A**uthorisation and restriction of **C**hemicals (EU Regulation 2006/1907)
- Applies to industrial/general chemicals imported or produced > 1 tonne / year. Final registration deadline **31 May 2018**.
- Makes industry responsible for obtaining and sharing data on the chemicals they market
- Encourages innovation by reducing regulatory burden on new chemicals



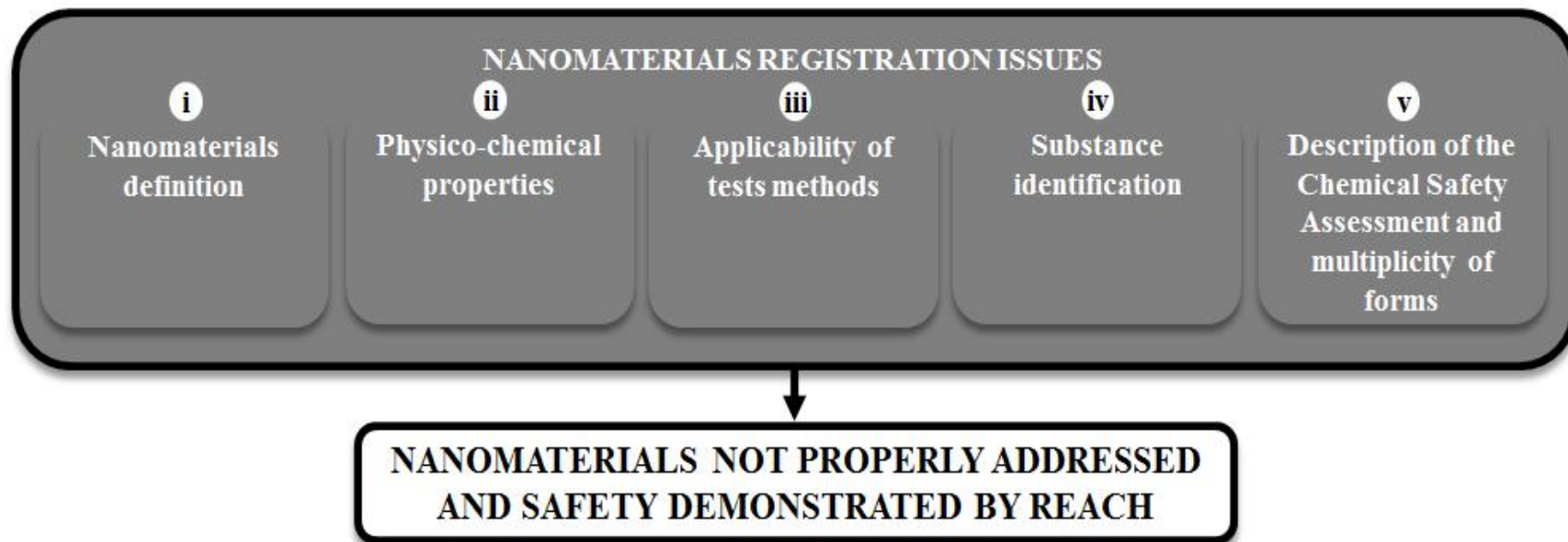
Brief introduction to REACH (2)

- Companies required to produce hazard and exposure assessment for substances
- This process will be adapted for nanomaterials



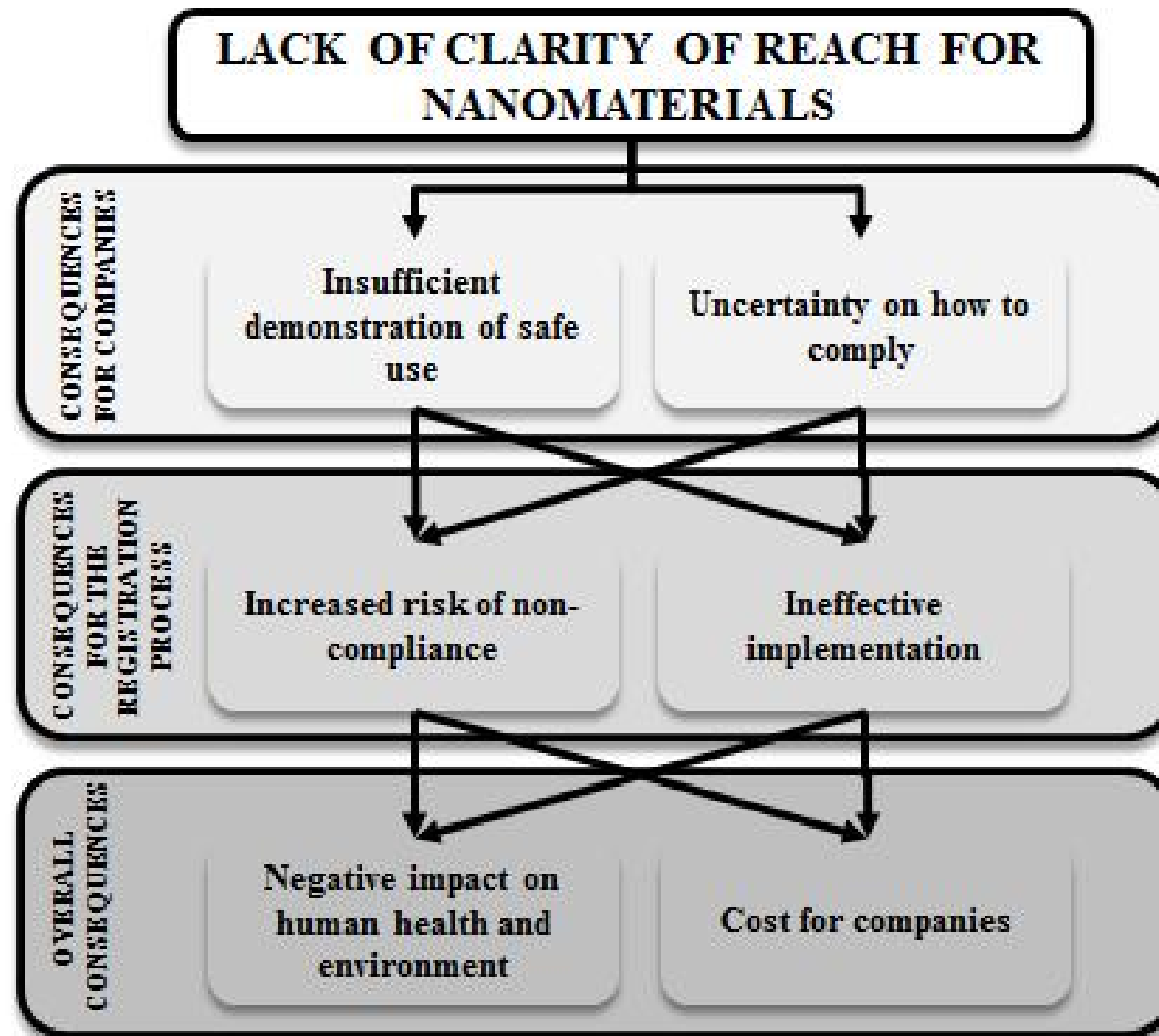
Nanomaterials in REACH – the problem

- Nanomaterials covered by definition of a "substance" in REACH, but no explicit reference to nanomaterials in REACH text.
- EC's Second Regulatory Review on Nanomaterials (October 2012) – REACH does not sufficiently address nanomaterials.
- Current system not delivering as expected, e.g. Board of Appeal decision¹ - ECHA must amend REACH Annexes in order to request detailed substance identity information on nanomaterials



Credit: EU

Nanomaterials in REACH – the consequences



Nanomaterials in REACH – the amendments

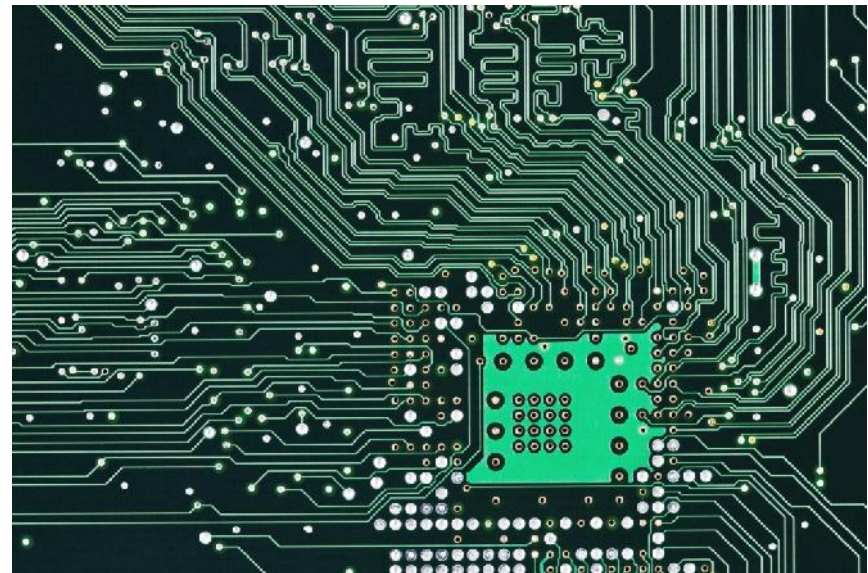
- No formal proposal on amendments to the REACH annexes yet – slow pace of progress.
- Amendments to include:
 - General guidance on fulfilling information requirements for nanomaterials
 - General clarification statements for nanomaterials in REACH Annexes
 - Specific scientific-technical considerations for nanomaterials
- Current key points of debate centre around applicability of testing methodologies for nanomaterials



Credit: EU

Nanotransparency Measures

- Following the Second Regulatory Review on Nanomaterials, EC evaluated whether mandatory registry necessary to increase transparency and ensure regulatory oversight on nanomaterials
- ECHA instead developing 'European Union Observatory for Nanomaterials', providing existing information on nanomaterials
- The Observatory will be web-based, building on the existing JRC platform
- Information sources for observatory will include data generated by various pieces of EU legislation (e.g. REACH, biocides, cosmetics), from national inventories, research projects, and market studies.
- Three phase implementation with first phase is set to go live in summer 2017.



Credit: Thinkstock

International Chemicals



- Sustainable Development Goals – SDG 12.4

“By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment”

- SAICM – post 2020 intersessional process



- OECD – 56th Joint Chemicals Management Meeting – May 30-1 June, Paris

OECD Working Party on Manufactured Nanomaterials

- International co-operation on health and environmental safety-related aspects of manufactured nanomaterials.
- Achieved through the development of test guidelines and guidance documents.
- Defra currently reviewing engagement and would welcome views on projects



Credit: OECD

Defra Engagement on Nanomaterials

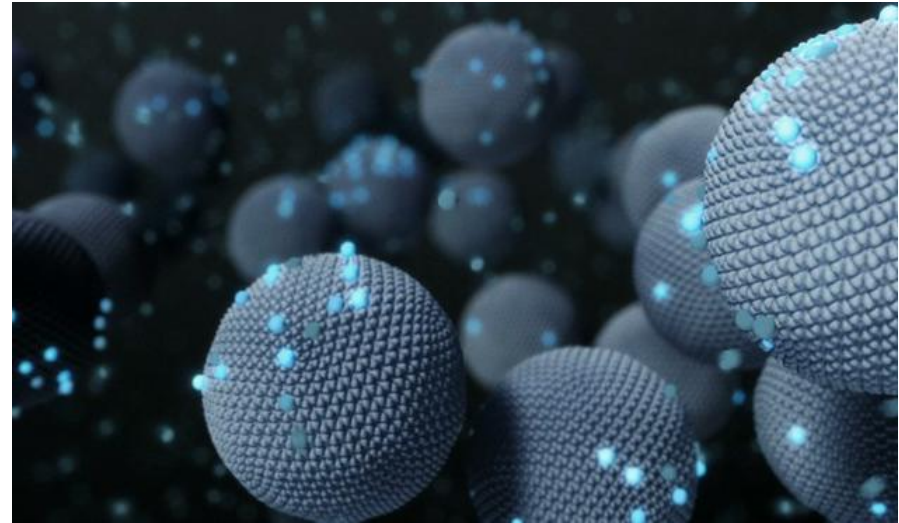
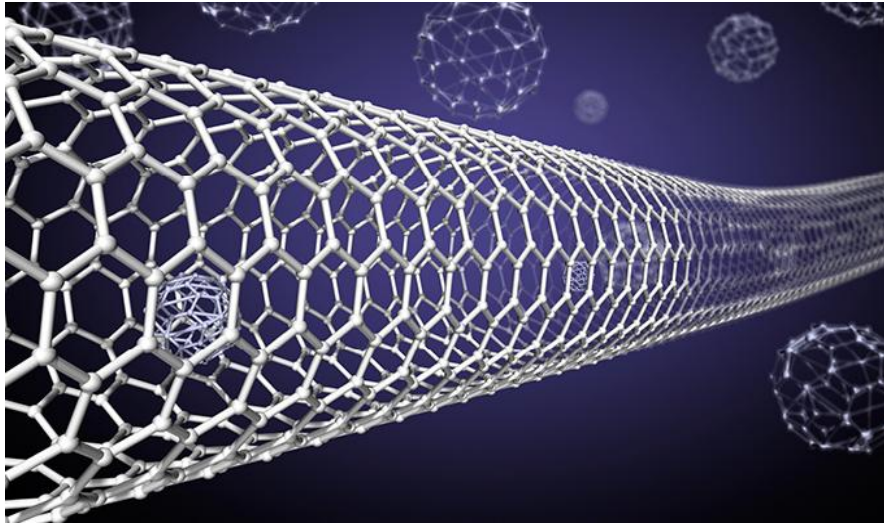
**Nanomaterials
Environment Academic
Group (NEAG)** – university
academics, government-
sponsored laboratories and
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**Nanomaterials
Environment and Health
Government Group
(NEHGG)** – Whitehall
Departments, Devolved
Administrations and
regulators

**Nanomaterials
Environment and Health
Industry Group (NEHIG)** –
industry-led group

**Nanotechnology Supply
Chain Forum** – industry-led
group run by Chemical
Industries Association

Questions?



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